

AN ESSAY

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ON THE

CONNECTION OF MENTAL PHILOSOPHY

WITH

MEDICINE.

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MENTAL PHILOSOPHY,

ITS CONNECTION WITH MEDICINE.*

The celebrated Dr. Rush, in enumerating the causes that retarded the progress of medicine, adduces as one of the principal, the neglect of cultivating those branches of science which are most intimately connected with medicine. These are, says he, chiefly "natural history and metaphysics." The former term he used in its widest sense, comprising both the animal and vegetable kingdom; but by the term metaphysics, he intended to include only that field of inquiry which relates to a knowledge of the operations and faculties of the human mind.

Though the above remark of Dr. Rush was made nearly a half century since, yet it may apply, if we mistake not, with equal force and propriety to the present state of medical science. While every other branch of knowledge connected with medicine has been rapidly progressing, that styled here metaphysics, has, to a very great extent, been treated with entire neglect by a large majority of this profession. Perhaps it may be safely stated, that in no other department of human improvement has there been a greater advancement for the last fifty years, than in that of medicine. Every year has witnessed some important developement of new truths, as well as a more safe and correct application of those already discovered. Anatomy,

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Physiology, and Surgery, have each within this period been enriched by many splendid discoveries and improvements. Pathology, which then was scarcely known or recognised as a distinct branch of medical study, has since received great attention, and has shed a vast amount of light upon the causes, symptoms, and treatment of disease. The departments of *Materia Medica* and *Therapeutics* have also been greatly improved by many new discoveries in chemistry and pharmacy. Add to these the experience and observations of many able and skilful physicians, and we have medicine in its present highly cultivated and improved state. But the same cause which Dr. Rush mentions as retarding the progress of this noble science, still exists. While every other branch of medical knowledge has been constantly advancing, a knowledge of *mind*, as far as medicine is concerned, has remained almost stationary for centuries. Dr. Southwood Smith very correctly observes, that "the degree in which the science of mind is neglected in our age and country—and may it not be justly added, in our profession—is truly deplorable." There must be some cause or reason for this state of things, and the writer proposes in the present essay to inquire—

I. *Why* the cultivation of metaphysics is so generally neglected by medical men; and

II. To point out the intimate connection of mental philosophy with medicine; and

III. To offer some remarks upon the importance of a knowledge of this science to the physician.

In the first place, it cannot be adduced as a reason why mental science is not more successfully cultivated, that not sufficient talent, learning, and research, have been devoted to the subject. Some of the best minds that the world ever produced have laboured most assiduously in this field of study, and their productions bear the stamp of unwearied industry and profound attainments. Again: this neglect cannot be accounted for by any reasons

deduced from the nature and unimportance of the subject. All writers on the philosophy of mind have borne their united testimony, that a knowledge of the principles and applications of this science is of the highest possible importance. But the great and most efficient cause of this neglect, as we apprehend, remains to be stated—it is the *erroneous mode of investigation* that has been hitherto employed; the leading defects of which may be summed up under the following heads.

1st, Metaphysicians have omitted in their investigations almost entirely the intimate and necessary connection that exists between the mind and the body. In all their researches, they have viewed the mind as an *abstract essence*—as existing, and performing all its operations, independent of any material instrument or agency. They have treated not only with neglect, but with disrespect, that great law established by an all-wise Creator—viz. that *mind, in this world, should be dependent on physical organisation for its manifestations*. This law constitutes the only true foundation upon which any correct system of mental philosophy can possibly be based; and the consequence of overlooking this condition, has had the most disastrous effects on the cultivation of metaphysics. The very term itself has become a by-word, and those who are devoted to its pursuits, are not unfrequently made the subject of remark and ridicule. To call a man (observes a popular writer) a metaphysician, at the present day, is a delicate mode of recommending him to a lunatic asylum; and Dr. Armstrong, the well known writer on medicine, has wittily defined metaphysics to be “the art of talking grave nonsense upon subjects beyond the reach of the human understanding.” Dr. Bartlett, one of our countrymen, very justly remarks, that “almost the whole history of metaphysics is a record of absurdities, inconsistencies, and contradictions. The very name has become, almost by common consent, only another name for intellectual harlequinism and jugglery. Never has the human mind

been guilty of playing more fantastic tricks, than when attempting, by misdirected and impotent efforts, to unriddle the mystery of its own constitution."

2dly, Writers on this subject have not only based their systems of philosophy on *reflection* and *consciousness* in general, but they have erected their own individual consciousness into a universal standard. Says Dugald Stewart, in his *Philosophical Essays*, "all our knowledge of the *human mind* rests ultimately on facts for which we have the evidence of consciousness. And accordingly, in my inquiries, I have aimed at nothing more than to ascertain the laws of our constitution, *as far as they can be discovered by attention to the subjects of our consciousness.*" This remark of Stewart will apply to nearly all the writers of the metaphysical school. But instead of consciousness being a true guide in mental investigations, it is decidedly unsafe and erroneous. In the first place, consciousness affords no positive evidence of the existence and functions of the cerebral organs, by means of which alone the mind acts in this life. It simply takes cognisance of mental operations in general, and throws comparatively but little light on the nature or number of the distinct faculties of the mind. Again: it is impossible for an individual to base evidence on this source alone, without considering *his own* consciousness as a standard for *all others*. This constitutes one of the most radical errors of the metaphysicians. They have taken their own minds as a standard, or type, for the whole human race; and, accordingly, each has begun to erect a system or theory of his own, by demolishing that of his predecessor. Now, the consciousness of no two persons are alike, any more than the features of their bodies; and it is utterly erroneous, as well as absurd, to consider such a guide or rule as susceptible of universal application. The great variety of systems, theories, and speculations in mental philosophy have arisen, in no small degree, from this source. Hence, too, the great diversity of opinions, as well as contradictions in

conclusions, on the part of those devoted to its pursuits. This very fact affords *prima facie* evidence that their premises were false; and, consequently, that their systems were not founded in nature, whose laws, when correctly interpreted, are always harmonious and every where the same. Truth, like its author, is ever consistent with itself.

3dly, Another radical defect in past methods of investigating mental phenomena, consists in an almost entire reversal of the true mode of studying nature. *Observation* and *experiment* are the only sources by means of which we can derive any positive evidence for the establishment of principles in science. Facts must first be observed, and properly classified; and when a sufficient number have been collected, or none of a contradictory nature can be found, general principles may safely be deduced from these, and be considered as permanently established. But instead of pursuing this slow and tedious process, as marked out by the immortal founder of the inductive philosophy, metaphysicians have first commenced by forming visionary hypotheses and assuming certain premises, and afterwards have attempted to reconcile facts with these. They have retired to their cloisters, and speculated by the light of their own consciousness, when they should have studied by observation and experiment the great book of nature. They have capriciously allotted faculties to man, and arbitrarily dictated laws to nature; and the consequence is, there has been but little of truth mingled in their researches. Some have denied to the mind all *innateness* of disposition or character, and have maintained that it was precisely like a piece of white paper, (*tabula rasa*,) capable only of being acted upon, and moulded by, outward impressions. Others have assumed that all minds were by nature *alike* as to capacity, and that the great diversity in the talents of different men was solely occasioned by external circumstances. In fact, no two leading metaphysical writers can be found, who agree as to the nature or number of the faculties of the human mind.

4thly, Another serious defect in past investigations on this subject, is a complete failure to account for many mental phenomena. It is to be presumed of every true science, that it will afford some rational explanation of the principal causes and relations of the various phenomena of which it treats. But it is far otherwise with the one under discussion. Many facts in this science, as far as the labours of metaphysicians are concerned, now for more than two thousand years, remain to this day entirely inexplicable. They afford no rational explanation whatever of the following topics: *nature of genius; causes of diversity in talent and moral feeling among different individuals; effects on the mind of opium, and other intoxicating substances, taken into the stomach; difference between the sexes; the process of gradual developement of the mental faculties; the causes of idiocy; the phenomena of dreaming, somnambulism, insanity, monomania. &c.* Moreover, the philosophy of the *will*, the laws of *free agency*, and the different degrees of *human accountability*, have never yet been satisfactorily expounded by any system of metaphysics. Other instances of failure might be adduced, but certainly the facts and phenomena already mentioned, among the most important in life, should be clearly and rationally accounted for by a system of mental philosophy. Again: it is fair to infer that a science which should give a correct exposition of the faculties of the mind, and the laws which govern their developement, would be fraught with the highest practical benefit to mankind. But when examined by such a test, how directly the reverse of this are all the labours of metaphysicians! Their researches have been altogether too speculative and ethereal to be reduced to any practical purposes. The subject itself has not only fallen into disrepute, but, as a branch of study, receives scarce any attention, at the present day, in our seminaries and institutions of learning. In view of these facts, it is not surprising that the study of mental philosophy should have been neglected by medical men. Its

principles, as hitherto taught, have had too little to do with *physical organisation*, in order to come under their cognisance. But when the true mode of investigating the subject is correctly understood and admitted, it must devolve on the members of this profession to *take the lead* in its cultivation: and they can then no longer continue to neglect it without violating the most sacred duties which they owe to medicine, as well as sacrificing the best interests of the public. This brings us to a consideration of our second general head.

II. *The connection of Mental Science with Medicine.*—Before entering directly upon an examination of this question, it will be necessary to decide, or settle in some measure, what are the *true* principles of mental science. It will be seen, from the preceding observations, that we cannot rely upon the mode of investigation adopted by metaphysicians, neither can we obtain from this source a correct knowledge of the philosophy of the human mind. This fact must be admitted, we think, by all candid and competent judges. What, then, is the true foundation of mental science? What are its principles, and the nature and amount of evidence in support of them?

First, then, we have no positive knowledge whatever of mind as an abstract essence or entity. Though we believe it to be of an immaterial and spiritual nature, destined to immortality, yet God has never endowed us with faculties capable of comprehending or taking cognisance of any such existence. It is therefore useless to indulge in any speculations about its *nature* or *essence*, and folly to predicate a system of mental philosophy upon such a basis. All we can possibly know of mind, as manifested in this world, is through its material instrument. That the brain is the organ of the mind, has been the united testimony of the best writers on Anatomy for centuries, and is, moreover, confirmed by the opinions of the highest living authorities on the subject. Here, then, is the first principle—the foundation of mental science. In the second

place, the brain is composed of a congeries of organs, corresponding in number to the faculties of the mind. This is proved by analogy, observation, and experiment. The brain, as its Anatomy shows on dissection, is a complex viscus or body, and is made up of distinct parts or organs. Now, according to a law pervading all organic matter, where distinct organs are found, however similar in structure, or nearly connected in their relations, they perform entirely different functions. The brain cannot be an exception to this universal law. Again: the mind consists of a plurality of faculties, and, in accordance with the counterpart of the law just stated, it must necessarily have a plurality of instruments. And both observation as well as experiment, prove that these instruments are distinct organs in the brain. Thousands, who have made accurate and extensive observations, and whose testimony cannot be called in question, agree on this point. They have, moreover, collected such an amount of facts in confirmation of it, as to afford positive and irresistible evidence of its truth to every unprejudiced and well-disciplined mind. It has also been found, by actual experiment in a multitude of instances, that whenever particular parts or organs of the brain suffered serious injury, the corresponding faculties of the mind have invariably been more or less impaired in their manifestations. No person can candidly and thoroughly investigate this proposition, without being absolutely compelled to admit its truth.

The third great principle in this science may be thus stated—the size of the organ, other things being equal, is a measure of the power of its corresponding faculty. This law is also one of general application. The conditions involved in the phrase, “other things being equal,” will of course vary in character under different circumstances; but when properly considered, size is strictly a measure of power, and there cannot be found an exception to this law throughout the universe. It is unnecessary here to accumulate facts either for the purpose of illustrating or proving this principle.

Our next inquiry is, can we ascertain accurately the size of these several organs in the living head? And, secondly, can we, by making proper allowance for the influence of these other conditions on size, judge correctly of the strength of the different faculties of the mind? These questions must be settled by matters of fact and actual experiment. They afford no chance for speculation or sophistry, and none but those who have carefully examined the subject, are qualified to give testimony in the decision. First, then, can the size of the brain and its various parts be ascertained? Says Magendie, "the only way of estimating the volume of the brain in a living person, is to measure the dimensions of the skull." Sir Charles Bell also observes, that "the bones of the head are moulded to the brain, and the peculiar shapes of the bones of the head are determined by the original peculiarity in the shape of the brain." Blumenbach, Cuvier, Monro, and other distinguished anatomists, have expressed similar sentiments. Thus by various measurements of the skull, then, externally, we can ascertain the size of the different organs of the brain. It is true there may be certain exceptions to this principle, as in the case of disease or old age, but these by no means invalidate its truth, or the practicability of its application. Some difficulty may also occasionally be experienced from the extreme thickness or irregularity of certain parts of the cranium, but the precise nature or amount of this difficulty can generally be understood—proper allowance can be made for it, and very correct inferences drawn as to cerebral development.

Being able, then, to ascertain the size of the several organs of the brain, can we judge correctly of those conditions which influence or modify its functions? These are chiefly, constitution, temperament, health, and education, a knowledge of which may certainly be ascertained, both from the organisation of an individual, as well as from his own statements concerning his history and

circumstances. This remark is not mere assertion—it is supported by a multitude of facts, and did the occasion require, we might furnish an amount of evidence in confirmation of its truth that could be neither disputed nor denied; but, for the present, must content ourselves by referring the reader to such works as treat particularly of those points. It may be asked, if we consider the above propositions sufficiently proved and established to be regarded as settled principles in mental science? We reply in the affirmative. This question is not to be decided by our individual knowledge on the subject, nor by the ignorance of the community generally. All the great principles in physical science have been discovered, proved, and established by a few original minds; and the truth of such discoveries is always to be admitted, not by the extent to which they have been propagated, nor by the mere number who publicly advocate them, but from the positive evidence furnished by their original discoverers and expounders. It is thus we judge in relation to the truths of Chemistry, Geology, and Natural Philosophy; and it is unfair, as well as unjust, not to apply the same rule to mental science. For its principles are based on precisely the same kind of evidence, appealing directly to the senses, observation, and experiment; and we venture to hazard the opinion that its leading advocates are as competent judges in this matter, as the teachers of any other great department of science. Did space permit, we might adduce many incontrovertible facts and arguments in proof of a system of mental philosophy based on these principles—we might show how beautifully and perfectly it accounts for all mental phenomena, and how vastly superior it is, in practical utility, to all other systems; but our more immediate object is to point out its connection with the distinct departments of medicine.

Anatomy.—The dissection of the brain has been hitherto conducted on strictly mechanical principles, and that, too, in violation of a fundamental law in anatomy. It is a rule,

laid down and invariably adopted by the best anatomists, that all parts or organs of the body should be dissected in harmony with their functions. And, in accordance with this rule, whenever an organ of a very complicated structure is to be dissected, its various parts and relations should be exposed in the best possible manner, to display the offices which it performs in the animal economy. It is only by pursuing this course, that we can ever arrive at a correct knowledge of the structure of any organic substance. But the brain—the most important viscus in the human body—has been, and is still, dissected by a majority of anatomists without the least reference whatever to its functions. They proceed to cut it up into slices, like a ham or a cabbage-head, beginning the work of destruction upon its upper surface and proceeding downward, cut directly across its tissues just as chance or accident may happen to direct; whereas they should commence the dissection at the base of the brain—where all the nerves and commissures centre—unfold their several structures in regular order, and trace out their distinct relations with a particular reference to their functions. As a consequence of this mechanical course of dissection, the various parts of the brain have been designated by names entirely inappropriate and unphilosophical. We cannot refrain from quoting some remarks on this point by Dr. Conolly, formerly Professor of Medicine in the London University, which appeared in the ninety-fourth number of the *Edinburgh Review*. Says Dr. C.—“Up to this day, our memory is pained by the recollection of the barbarous names and regular sections of what was then the dullest part of anatomical study, which, although often repeated, left no trace but of its obscurity or absurdity. Here, an oval space of a white colour, and there a line of gray, or curve of red, were displayed; here a cineritious, there a medullary mass; here a portion white without and gray within, there a portion white within and gray without; here a gland patuitary, and there a gland like grains of

sand; here a ventricle, there a cul-de-sac, with endless fibres, and lines, and globules, and simple marks, with appellations no less fanciful than devoid of meaning." We regret to acknowledge that this is a true description of the manner in which the anatomy of the brain is studied, even at the present day, in most of our medical institutions. It is, emphatically, "the dullest part of anatomical study," and must certainly continue so, until its structure as a whole, and the relations of its several parts, are examined with a special reference to the important functions which they perform. When this is done, the study of the brain will become the most interesting department of anatomy, and it will then be found that mental philosophy sustains, in this respect, a very intimate and necessary connection with medicine.

Physiology.—This term literally signifies the *doctrine of nature*; but in its more general and popular acceptation, it is that science whose object is to investigate the functions of all organic existences, including both those of the animal as well as the vegetable kingdom. It is, however, as a branch of study, chiefly confined to the organs of the human body. These have now been made the subjects of special study for centuries, and there remains only two or three organs whose uses are not generally understood. Of these, the brain is the only organ of any consequence. From its texture, position, and anatomical relations, it might be inferred, *à priori*, that this viscus performed very important functions in the animal economy. This inference is rendered still more probable from the great amount of blood it receives—being nearly one seventh part of the whole circulation. But, notwithstanding this presumptive evidence as to the importance of the functions of the brain, and the various means that had been employed for ascertaining them, they remained enveloped in profound mystery till near the close of the last century. Dr. Gall—whose name, however much it may be derided at the present day, posterity will place beside those of

Galileo, Harvey, and Newton—has the honour of discovering the true functions of the brain. This he effected by observation, which is the only safe and correct guide in such inquiries. Some anatomists have pretended that the *structure* of an organ revealed its *functions*; but this position is false and untenable. For instance, no anatomist, by dissecting the optic nerve, could predicate that its function is to minister to vision; nor by dissecting the tongue, could discover that it is the organ of taste. There is not a single organ in the human body, whose offices have been disclosed by mere dissection. Again: this knowledge cannot be obtained by means of experiments on living animals, or by pathological researches. These methods have been more especially adopted by the French, who, by their varied and multiplied experiments, have made many valuable contributions to the science of physiology. But a knowledge of the uses of such an intricate and complex viscus as the brain, could never first be ascertained by any such modes of investigation, though they might throw much light on various points after its primary functions had once been discovered by observation. Did our limits permit, we might give the most satisfactory and conclusive reasons in proof of this statement, but can merely remark that it perfectly accords with the whole history of such inquiries in physiology and pathology.

It is now admitted, by all who have carefully examined the subject, (and no others are competent judges in the case,) that the functions of the brain partake of a three-fold nature—viz. *motion, sensation, and mental operations*. The powers of motion and sensation depend principally upon the central and basilar portions of the brain, which are more immediately connected with the spinal cord. This part of physiology is very imperfectly understood, and much, doubtless, remains yet to be discovered. The mental powers depend for their manifestations on the cerebral organs composing the middle, posterior, and anterior lobes of the brain. These powers, when examined and

classified according to their manifestations, are divided into the *affective* and *intellectual* faculties. These are again subdivided into the *animal feelings*, *selfish propensities*, *moral sentiments*, and *perceptive* and *reflective intellect*. We have thus a cerebral organ for every distinct faculty of the mind, and consequently as many organs as faculties. If such, then, are the functions of the brain, mental philosophy sustains a most important relation to medicine.

Surgery.—All injuries or diseases involving the brain, and requiring surgical aid, have universally excited great interest. A majority of the operations for such injuries have always been regarded as among the most difficult in surgery, as well as dangerous and uncertain in result. The cause of this arises from two sources:—first, the importance of the brain, as being the seat of life; and, secondly, from our imperfect knowledge of its functions. It is impossible to treat a disease, or operate for an injury, with any certainty of success, without correctly understanding the difficulties involved. The two principal means of obtaining this information are—first, *change in organic structure*; and, secondly, *functional derangement*. Now, as many injuries happen to the head which neither lacerate the integuments, nor in any visible manner affect the skull, and as the brain itself cannot be examined, the surgeon must found his diagnosis chiefly upon those symptoms which grow out of functional derangement. But where the true functions of an organ are not understood, how can he judge accurately of the *kind* or *degree* of derangement that may exist? The whole history of surgery shows that many operations for injuries and diseases of the head have been a matter of mere *experiment*, guided, perhaps, by some experience, but not by any well established principles. The consequence is, there has been less advancement in this department of surgery than in any other. It is true, there has been a great improvement in the treatment of those affections connected with the

external senses, though none, comparatively, in cases where the brain was concerned. But when the offices of this organ are clearly and fully understood, we anticipate the most important improvement in this department of surgery. Our limits will permit us to notice only two or three of the advantages to be derived from this source.

1st, It will enable the surgeon to judge more accurately of the precise character of an injury or disease of the head. It is now admitted, by the best physiologists and pathologists, that the peripheral part of the brain is the seat of mental operations, while the more central portions are connected with the powers of sensation and motion. Whenever, therefore, the faculties of the mind are deranged or impaired in their manifestation, it is certain that the exterior parts of the brain are affected; but when we have convulsions, paralysis, &c. of the body, it is equally certain that the more central portions are involved. To such an extent may this mode of diagnosis be perfected by future discoveries, that, from a long and critical examination of mental manifestations, the surgeon can determine the precise convolution injured; also, by carefully observing the *kind* of convulsion or paralysis, he may be able to decide what particular ganglion or commissure of the brain is affected.

2dly, There are sometimes extravasations of blood between the skull and dura mater, or within the membranes enclosing the brain, and it becomes necessary to trepan the skull for its removal. The chief difficulty that surgeons have hitherto encountered in such operations, was to ascertain its exact location. Now, by a thorough knowledge of the faculties of the mind, both in a healthy and deranged state, the surgeon will be able to select the precise seat of the effusion.

3dly, It is well known that the state of the mind has a most powerful influence over the body, especially when in a morbid or diseased condition. In no instance is this reciprocal influence more powerful, either for good or for

ill, than in severe and unexpected injuries: and under no circumstances whatever can it be brought to bear more efficiently than in surgical operations, which are attended with great difficulty and danger. There are undoubtedly many cases where the success of an operation, as well as the life of the patient, depends almost entirely on the state of mind or feelings at the time and afterwards. Now, a system of mental philosophy, based upon the functions of the brain, will afford the most essential aid in such cases. It will enable the surgeon to detect at once the strong and weak faculties of his patient, and thus assist in presenting such motives, and making just such appeals, as will operate most beneficially on his feelings and spirits. Says Dr. Rush, speaking in relation to medicine in general, "the advantages to be derived from this source (*i. e.* a knowledge of mind) might be a hundred times greater, were they properly directed by well-educated physicians."

Pathology.—This is comparatively a new light in medical science, as but little attention was given to the subject till within a few years. Its object is to investigate the changes which have taken place in the functional derangement or structure of an organic body, either as the cause or effects of disease. This mode of investigation has been prosecuted with great zeal, talent, and industry, by many of the most distinguished men in the profession, and it is to this source, more than to any other, that we are recently indebted for some of the most valuable discoveries and improvements in medicine. Among other inquiries, the morbid conditions of the brain have by no means escaped the notice of pathologists. At the same time, we venture to affirm that there is not another organ in the human system which has received an equal amount of attention as to its pathology, but what has been attended with more definite and satisfactory results. The cause of this arises from three sources:—viz. first, from the extreme delicate texture of the brain; secondly, from the very complicated

structure and intimate relations of its several parts; and, thirdly, from our imperfect knowledge of its functions. The last, as we apprehend, is by far the most fruitful source of difficulty in itself, besides being, to a considerable extent, the occasion of the two former.

Pathology, as a science, is based on physiology. For an examination into the causes and effects of disease, whether it be functional derangement or change in organisation, presupposes necessarily a knowledge of the healthy state and functions of an organ. Otherwise we could not judge accurately of the deviations from health, neither could we understand the changes which have been occasioned by disease. And never can pathological researches, as to the brain, be carried out and perfected, till the physiology of all its parts is thoroughly comprehended. This knowledge is indispensable, in order to make proper observations, and to establish general principles in pathology. *First*, If we were perfectly acquainted with the functions of every distinct portion of the brain, we should then know precisely what parts to examine in case of disease, and would thus be far more likely to discover the morbid derangements in function, or the nice changes in structure, that may exist. *Secondly*, The various parts of the brain sustain very intimate and important relations to each other in the performance of their functions, including muscular motion, sensation, and mental operations. Now, these several relations and connections must first be understood in a *healthy* state, before we can clearly perceive the causes or effects of disease in all the parts of such a complicated viscus. *Thirdly*, The brain is subject to a great variety of affections where no indications or traces of change in organisation have ever yet been discovered by the best pathologists. Whether this difficulty arises from the extreme delicacy of its texture, or the want of more perfect instruments for making the examination, it is unnecessary here to decide. But it frequently happens, as is rendered evident by external symptoms, that very

great functional derangement actually exists, and, according to all analogy, there is every reason to believe that some change in physical structure must either have preceded, or been occasioned by, this derangement. Now, a thorough knowledge of the functions of the brain, embracing the various kinds of motion and sensation, as well as mental manifestations, will not only incite, but enable us to recognise far more accurately the *kind* and *degree* of deviations in these, from a state of health. We may thus, by continuing this mode of inquiry and examination, be able to detect changes in organisation which have hitherto entirely escaped the closest scrutiny of pathologists. Hence we see that a knowledge of physiology must precede that of pathology, and that mental philosophy sustains, in this respect, also a most intimate and important relation to medicine.

Practice of Medicine.—Aside from good natural abilities, two things are indispensably requisite to constitute any individual a successful practitioner of medicine. *First*, He must be thoroughly and practically acquainted with the causes and symptoms of disease; and, *secondly*, with the nature and application of the most appropriate remedies. And the more complicated the disease and difficult its treatment, the more important that his knowledge should be accurate, extensive, and well grounded. This is emphatically true, in reference to nervous diseases. It is stated in the Library of Practical Medicine—the most recent and popular work on the subject—that “the diseases of the brain are, at the present moment, more obscure than any other great class in the nosology.”

While there has been a constant improvement in the diagnosis and treatment of diseases affecting every other part of the human system, there has been comparatively but little advancement in respect to those of the brain. Dr. Stokes, in his valuable lectures on the Theory and Practice of Physic, has very correctly adduced the following circumstances as causes for such a state of things.

“*First*, The great obscurity of the symptoms; *secondly*, The want of correspondence between symptoms and known organic changes; and, *thirdly*, The necessarily imperfect nature of our classification of nervous diseases.” Let us briefly examine these points. Now symptoms, according to this same author, “consist in certain changes produced in functions.” But we have already seen that large numbers in the medical profession are wholly unacquainted with the real *functions* of the brain, and therefore they cannot judge clearly and rationally of the *kind* or *degree* of functional derangement; and hence the great obscurity attending the symptoms of diseases of this organ. We have, moreover, seen that *mental operations* constitute one of the most important functions of the brain—that the exercise of every individual faculty of the mind depends on a distinct cerebral organ—but how little is definitely and practically known concerning the healthy or morbid manifestations of these faculties! The knowledge that is already possessed on the subject is altogether too vague, indefinite, and speculative, to be applied to any practical or useful purposes in medicine.

The fact is, the study of mental science, as based on the functions of the brain, must, and will, in the process of time, constitute one of the most important features in the diagnosis and treatment of the diseases of this organ. As to the “want of correspondence between the symptoms and known organic changes,” this is easily explained. It is more apparent than real; for nature never contradicts herself. It originates chiefly from a false view or classification of symptoms, and this, consequently, from an imperfect knowledge of functions. There may be, we admit, more than usual difficulty in ascertaining and settling this correspondence in the pathology of the brain, but a certain connection must necessarily exist between its functional derangement and change in physical structure, according to all the known laws which govern organic matter; and we have not the least doubt, but the precise kind and

extent of this correspondence will yet be discovered and established.

The third difficulty in the way of understanding nervous diseases—viz. their imperfect classification—grows out of the two former, and can be rectified only in proportion as the functions of the brain become clearly and fully understood. The classification of no science whatever can be correct or perfect, unless it is based on a true interpretation of all the facts and phenomena in nature appertaining to it. That the physician should be well acquainted with the most appropriate remedies in the practice of medicine, requires no argument to prove or enforce.

III. *The importance of a knowledge of mental science to the physician.*—This subject may be viewed under two general aspects: *first*, as connected with the duties which he owes to his profession; and, *secondly*, in the relations which he sustains to the public. It will be seen from the preceding observations, that neither the anatomy, physiology, nor pathology of the brain, can be fully understood without a knowledge of its functions, or, in other words, of mental philosophy; moreover, that such knowledge is indispensably requisite, in order to understand correctly the diseases of the brain, as well as to perform successfully many operations in surgery for injuries of the head. This knowledge is especially important, inasmuch as the principal and almost the only means we have of ascertaining the affections of this organ, is through the *kind* and *degree* of its functional derangement. We have no stethoscope to examine the state of the brain; neither can we form or correct our diagnosis by the physical signs of auscultation and percussion; neither is the brain, like most other parts of the body, susceptible of much pain from disease. Hence the great importance of understanding the functions of this organ, particularly of those portions connected with mental operations; for the morbid or deranged manifestation of these will constitute the surest and most unequivocal symptoms of disease. To speak of mental

excitement or depression in general terms, is not sufficient. We must know what *particular* faculty is involved, and *how much* it is affected. We might by such a course of diagnosis anticipate the very first intimations of nervous disease, and thus employ remedial agents to much more advantage. It is not at all improbable but that a better knowledge of the functions and diseases of the brain will enable us to apply certain articles in the *materia medica* with far greater efficacy and success; new medicines may in this way yet be discovered, or different combinations made of those already in use.

Again: A knowledge of mental philosophy cannot fail to be of great advantage to the physician in the treatment of disease. That the state of the mind has a powerful influence over the body, either for good or for ill, has been universally acknowledged. It was remarked by Dr. Rush, that "consumptions, fevers, convulsions, diseases of the stomach and bowels, visceral obstructions, apoplexy, palsy, madness, with a numerous and melancholy train of mental diseases, are frequently brought on by the undue action of the passions upon the body." All must admit that the faculties of the mind operate as most powerful agents, either as causes or remedies of disease. A multitude of facts might be cited, where the exercise of certain mental faculties has proved entirely effectual in preventing or curing various affections. In this way, a salutary and healing influence has been exerted upon the body when all other medicinal agents have been found utterly useless. It is to this source that quackery and empiricism in medicine is chiefly indebted for success. It is by operating upon the *feelings* of patients, that quacks perform so many wonderful cures, and infuse such a magic charm into their patent drugs. How important, then, that the regular bred physician should be thoroughly familiar with the nature and application of an agency so efficient and powerful in the treatment of disease! But it is not enough to be acquainted with the powers or faculties of the mind, in a

vague, abstract, and general manner—such as love, hope, joy, grief, fear, sorrow, anger, &c. &c. We must know what *particular* organ in the brain is called into exercise at the same time—what is the precise character and strength of its mental faculty, and what are the most appropriate motives to be addressed to it. We must understand the nature and operation of those great laws which every where invariably regulate mental manifestations, and be able also to explain every fact and phenomenon connected with individual minds. The physician, of all others, should be competent to do this to his patient, and a system of mental science, based on the functions of the brain, places within his power the means of obtaining such information. He would be able, in this way, to recognise at once the peculiar temperament or idiosyncrasy of every individual patient, and could thus take the advantage of a multitude of circumstances of which he would otherwise be wholly ignorant. It is by pursuing such a course, that a knowledge of mind can be rendered, in its applications, a “hundred fold greater,” in the practice of the healing art, than the world has ever yet witnessed.

Again: The cultivation of mental philosophy is calculated to exert a most beneficial influence upon the progress of medicine. Our present limits will permit us to notice only a few of the advantages to be derived from this source.

1st, It will tend to do away with many groundless theories, hypotheses, and speculations, which, more than any thing else, have retarded the progress of this science. A large number of the works on medicine are comparatively worthless, because they are, in a great measure, filled with the mere rubbish of theory, controversy, and the opinions of men who cannot be considered as competent judges or safe guides. These theories are partly of ancient, and partly of modern origin. The cultivation of medicine formerly partook very much of the manner and spirit in which metaphysics were studied—dealing in abstractions and generalities, without sufficient regard to

facts, or the nature of the evidence upon which they were professedly based. The inductive philosophy, introduced by Lord Bacon, produced a great revolution in the study of medicine, and pointed out the true mode in which every department of this science should be cultivated; and by means of which, most of its discoveries and improvements, for the last fifty years, have been effected. Now, a system of mental philosophy, based on the functions of the brain, is founded upon the most extensive induction of facts, and enforces at every step the absolute necessity of observation and experiment. It will, moreover, tend to bring into constant exercise the *observing faculties* of the medical student, and render him exceedingly cautious that his conclusions are always founded upon correct data. It will thus prevent too hasty generalisation in medicine, and eventually become a standard to test the truth or falsehood of every new doctrine which claims to be based upon the great laws of physical organisation.

2dly, Such a system of mental philosophy will enable us to test the real merits of the *opinions* of men, and decide how much weight should be given, in matters of science, to mere human authority. There are four classes of persons whose opinions in medicine should always be scrupulously examined, and on certain subjects they should be entirely set aside, no matter how extensive their experience or profound their attainments; the difficulty arises from the *peculiar constitution* of their minds. The first class may be characterised as possessing very strong observing faculties, with deficient reflective intellect; these may observe, collect, and understand facts to any amount, but can never perceive or comprehend the force of *principles*, because they are *naturally* deficient in the powers of analysis and ratiocination. Wherever *general principles* are concerned, this class are not, therefore, competent judges. The second class of persons possess minds of a directly opposite cast, having strong reflective faculties, but weak perceptive intellect; such individuals are not

much given to observation themselves, neither can they appreciate the importance, or see the bearing, of *facts* in reasoning. They are inclined to dwell almost exclusively upon *general principles* and *abstract relations*, and not unfrequently become very speculative and theoretical in their views. Consequently, their opinions on all *practical* subjects must be received with much caution. The third class may be described as possessing, naturally, such an inordinate degree of self-conceit and tenacity of will, as to render them blindly obstinate, and wilfully set in their own way. They are always self-opinionated, and unwilling to examine new subjects, or alter any views which have long been entertained; and when their minds are once made up, no force of argument, or amount of evidence, will induce them to change or modify their opinions, simply because they *will* not be convinced. In the fourth class we would include those who are considerably advanced in life, and whose habits and modes of thinking have become so fixed and settled, as to run almost necessarily in one circle or channel. Such is the nature and organisation of the brain, on which the exercise of every mental faculty depends, that it is very difficult, if not impossible, for elderly persons to canvass properly and rationally the merits of new discoveries. It is true, individuals of this class may occasionally keep up with the times, and obtain a very good knowledge of all the passing events of the day; but it is rare—very rare—that an entire revolution or radical change ever takes place in their *opinions* on any important subject with which they have been constantly conversant for many years. This principle holds good both in relation to philosophy and religion, as well as the arts and sciences. Such is the testimony of all past history on this subject. We yield to none in our respect for age, as well as our confidence in the judgment of those of long and successful experience; yet we do say, that the opinions of men passed the middle age of life, should have comparatively but little weight in settling the claims of *new* disco-

veries and improvements. We verily believe that not only medicine, but that the progress of civilisation, as well as of the arts and sciences generally, have been seriously retarded by giving an undue importance to the mere authority or opinions of such men.

3dly, The study of mental philosophy will eventually rectify or counteract the injurious effects of *Nosology* on medicine. It has been a most unfortunate thing for this science, that its teachers should ever have laid so much stress upon the mere nomenclature and verbal description of diseases. In the first place, in order for such a course to be correct, it presupposes that the nature, causes, and symptoms of disease are already clearly and fully understood; and in the second place, that no change can be effected in these, either by time, climate, or other circumstances; and, lastly, that all individuals will look at these facts through the same medium, and arrive at precisely the same results; either of which conditions is absolutely impossible as well as absurd. Now, a nosological classification of disease, based on premises so false and erroneous, could not fail to have a most disastrous effect on medicine, and such has actually been the case. It has always operated as a serious barrier to any change or improvement; it has filled volumes on medicine with *words* comparatively destitute of ideas; it has cultivated the memory and fostered the credulity of the student at the expense of his judgment and independence, and led him as a physician to prescribe for the *names*, rather than the symptoms of disease. Now, a system of mental science, whose invariable motto is, "*res non verba quæso*," will lead to a more correct use and interpretation of language. It will teach us that words are the mere exponents of ideas, and should never be employed without clearly expressing some idea or stating some fact. It will show the absurdity of attaching fixed names and stereotyped descriptions to phenomena, the features of which are constantly changing, and so blended with each other that no distinct lines of

demarcation can possibly be drawn between them. It will constrain the student to observe and think for himself, and not rely so much on the opinions of others; it will compel him to study the great book of nature, rather than the productions of men. The immortal Hunter used to exclaim to his class, while pointing at the human body, "I never read—this is the book that I study, and it is the work which you must study, if you ever wish to become eminent in your profession."

That a knowledge of mental science is important to the physician in his relations to the public, may be rendered obvious by numerous other considerations, aside from its bearings directly on his professional duties. We have already seen that such knowledge is not only necessary, but absolutely indispensable, in order to understand correctly many diseases to which the human body is subject; moreover, that it is of the highest importance in the treatment of disease that the physician should be thoroughly acquainted with the faculties of the mind, and the laws which regulate their developement, as connected with the brain. Now, as the lives and the health of the community—objects, the dearest and most sacred to every human being—are frequently entrusted to the care of the physician, not only the dictates of philanthropy, but the claims of justice, require that he should make himself fully acquainted with all the remedial helps and agents in his power, which are calculated either to restore health or prolong life. It is also a duty which he owes to his individual patients, and the public generally, to employ his medical knowledge and exert his personal influence to *prevent*, as well as cure disease. This should be one of the leading objects of every well-educated and liberal-minded member of the medical profession. But in order to do this successfully, the community, as a body, must be made far better acquainted with the laws of the animal economy, and the means of preserving health, than they now are. Formerly, it was supposed that man had but little control over the

causes of pain, disease, and death; some considered these afflictions as the mere results of chance or accident, while others viewed them as the visitations of a "mysterious Providence," and all apparently thought little, and practically cared less, about informing themselves on the subject. Now, it is found that disease and premature death are the penalties of violated laws—laws which it is the duty as well as the interest of *all* to study and obey.

There is no question but that disease in a multitude of instances might be prevented—that a vast amount of health might be saved, and the lives of many individuals be very much prolonged, by a more general diffusion, among all classes, of a knowledge of physiology and hygiene. But before mankind will ever pay that attention to the laws of the animal economy which their nature and importance actually demand, they must see and realise *the entire dependence of all mental manifestations upon physical organisation*. The omission of this fact, whether it has been through ignorance or neglect, is one of the principal reasons why these laws have hitherto been so little appreciated or applied, both by the learned and the unlearned. Now, a system of mental science, based on the functions of the brain, is calculated more than any thing else to impress upon individuals, and the public generally, the importance of attending to those subjects which will vastly augment human happiness, by the prevention of disease and the promotion of health. And just in proportion as the principles of this science become understood, in the same proportion will individuals be induced to study the nature of their own constitutions, and yield obedience to the laws which govern them. For it will be found, by taking this view of the subject, that all possess within their own power the means of self-preservation and improvement, to a far greater extent than has ever yet been considered in past ages, or is even now conceived of by the great mass of the public. When we consider that *all the manifestations of the mind depend on the brain*, it becomes an inquiry of the

highest moment to ascertain what are the causes or instruments operating to affect its developement, and what may be the degree of influence which we can personally exert over these agencies. It will then be made to appear how powerfully the character of every human being is affected by physical organisation—that the degree of his adaptation to the enjoyment of the social and domestic relations, his desire and capacity of elevation as a moral and religious being, and also the amount of his intellectual ability, depend in a great measure on the brain; then, and not till then, will the attention of the public be suitably waked up to the importance of this subject. And of all others, it is the peculiar province, and may we not add the imperative duty, of the physician to be foremost in imparting this knowledge, and to take the lead in effecting a result so desirable and philanthropic.

But these principles have a wider range, and embrace far higher objects, than mere physical health or individual enjoyment. They have an important bearing on every thing which affects the interests of the human mind in this world, as well as its preparation for the next. The will of God, as revealed to man, may be found engraved upon his *works*, as well as in his written *word*; and the laws of the former are as binding and obligatory on his creatures as the injunctions and requirements of the latter. Before even Christianity can become *practically* what its divine author intended, or rather before its fruits will ever be exhibited in the conduct of men in all that beauty, consistency, and perfection which characterised its great exemplar while on earth, the *laws of the mind* must first be correctly interpreted and obeyed.

It should be remembered that these principles, though they had their origin with the creation of man, have but recently been brought to light, and made evident to the human intellect; and although they are considered as fully proved and established as the facts of chemistry or geology, by all who have thoroughly and impartially examined them,

yet the extent to which their truth is admitted, or that an application of them has actually been made, is very limited. This great work, therefore, remains yet to be done, and no small share of the labour belongs appropriately and necessarily to members of the medical profession. For the studies and pursuits of no other profession, or class of persons, are so nearly and intimately connected with mental science; this fact must be obvious from the exposition which we have already given of its principles. But aside from the superior advantages which the physician enjoys of studying the physiology of the brain, and understanding the various conditions that influence or modify its functions, the peculiar duties of his profession places him in the most favourable circumstances possible for acquiring a knowledge of human nature. In the language of Dr. Spurzheim, "No one has such opportunities of observing men at all times, and in all situations. He alone is present during the night and the day, to witness the most intimate concerns, and the most secret events of domestic life. Good and bad men, when sick, with difficulty conceal from him their true sentiments. To such a man, as knowing all that belongs to our nature, we unfold the most secret thoughts, and we acknowledge our frailties and our errors, in order that he may judge truly concerning our situations. There is, consequently, no man more called upon, no man more necessitated to study mankind, than the physician." Says Dr. Rush, "it is the *duty* of physicians to assert their prerogative, and to rescue mental science from the usurpations of schoolmen and divines."

But it is when we consider the great variety and extent of the applications of this science, that its cultivation becomes so important, and urges its claims on our attention in a manner superior to all other sciences or subjects of human research. It would require volumes to unfold all its numerous and varied applications, only a few of which can here be mentioned. It points out the only true mode of education (physical, intellectual, and moral) that

deserves the name. It has already shed a vast deal of light on the nature and treatment of insanity, thus bringing "joy and gladness" to multitudes whose situation for ages has been considered hopeless and irremediable. It is destined also greatly to reform and perfect our present systems of medical jurisprudence, criminal legislation, and political economy, as well as our social, civil, and religious institutions. It lays the only foundation for a system of ethics and morals—being the true exposition of the faculties and laws of the human mind. It is the "handmaid of religion"—the "elder revelation of God," and will eventually become "THE *philosophy* which the world for centuries has had only in expectation."